孕龍科技股份有限公司
Zeroplus Technology Co., Ltd.

SPECIFICATION

MODEL: B09006-LAP-SD2.0/SDIO-M

PART NO: _____

VERSION: V1.63

Approver		Check	Design
GM	PM		

Customer Confirm

*Please fax the file to Zeroplus Technology after signing.

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Content

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1 Software Download

Please download the software as the following steps:

Remark: We won't have additional notice for you, when there is any modification of the module specification. If there is some unconformity caused by the module version upgrade, users should take the module software as the standard.

STEP 1. Visit the website of Zeroplus: http://www.zeroplus.com.tw.

STEP 2. Click the **English** in the Instrument Division part on the Homepage.

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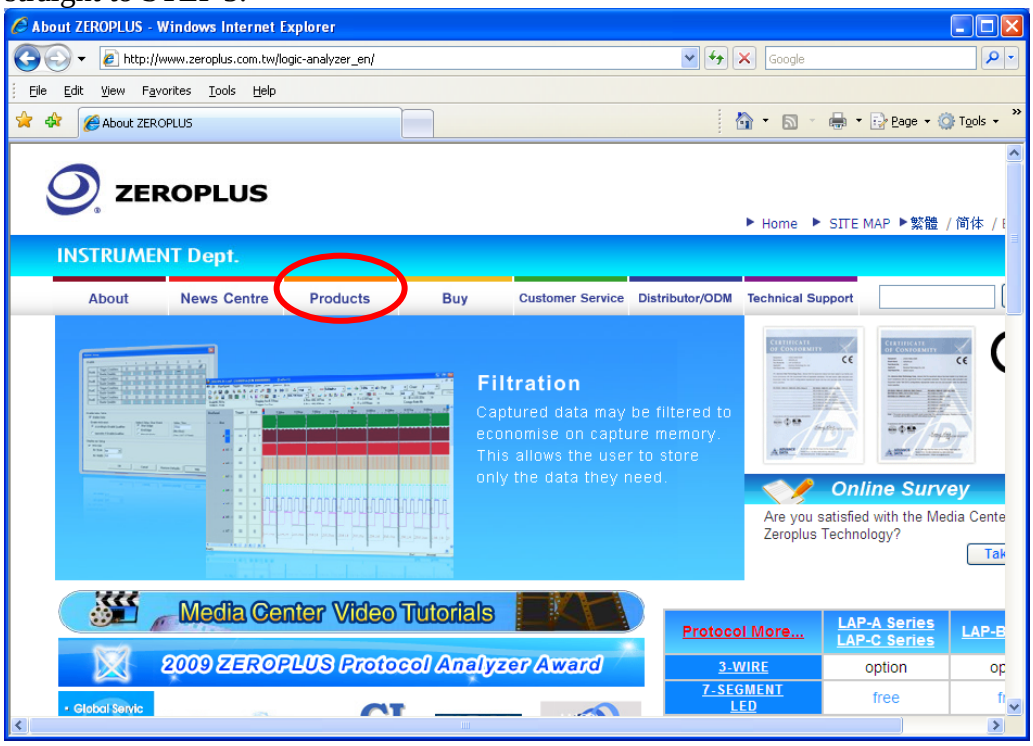
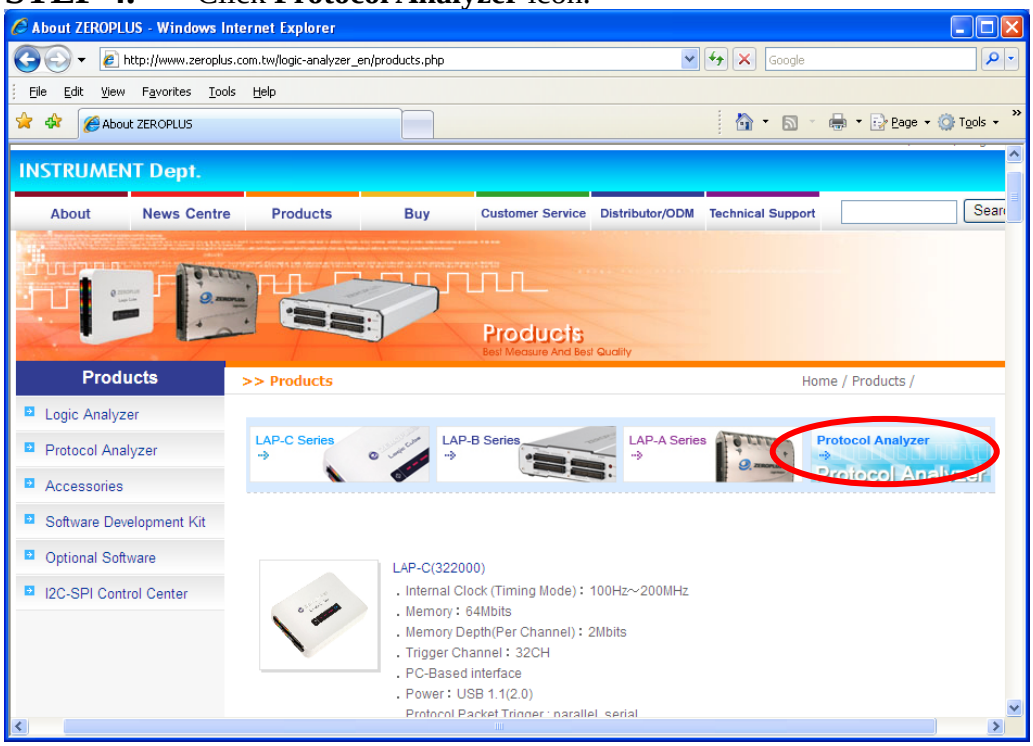
STEP 3. Click **Products** menu or select **Protocol Analyzer** item from its pull-down menu to go straight to STEP 5.



STEP 4. Click **Protocol Analyzer** icon.



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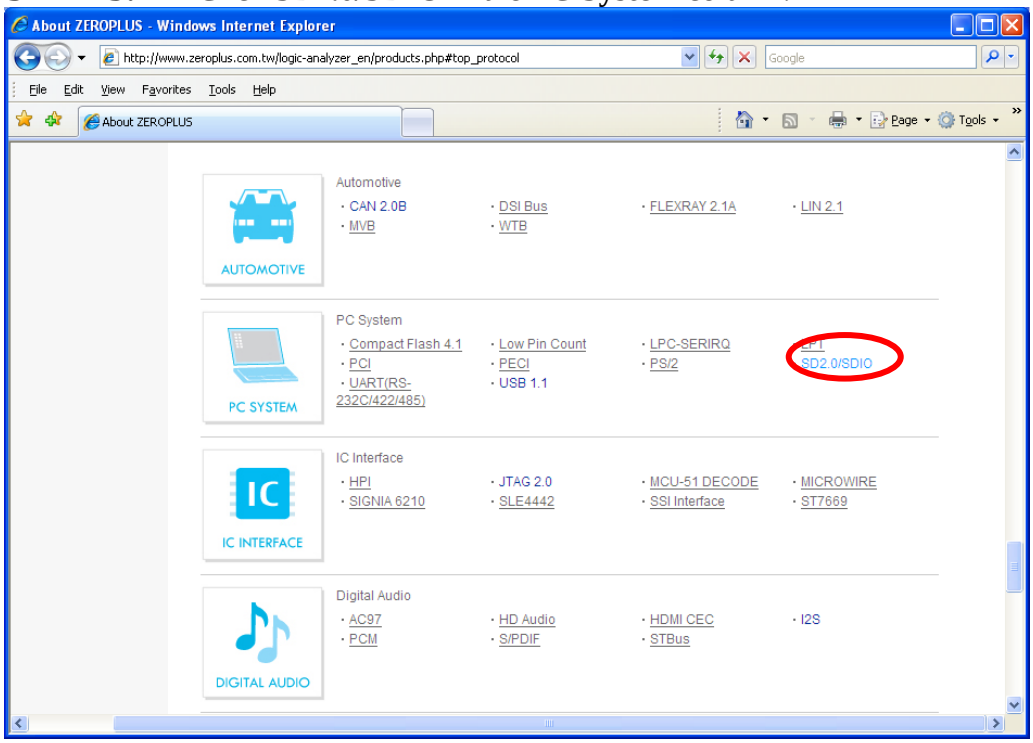
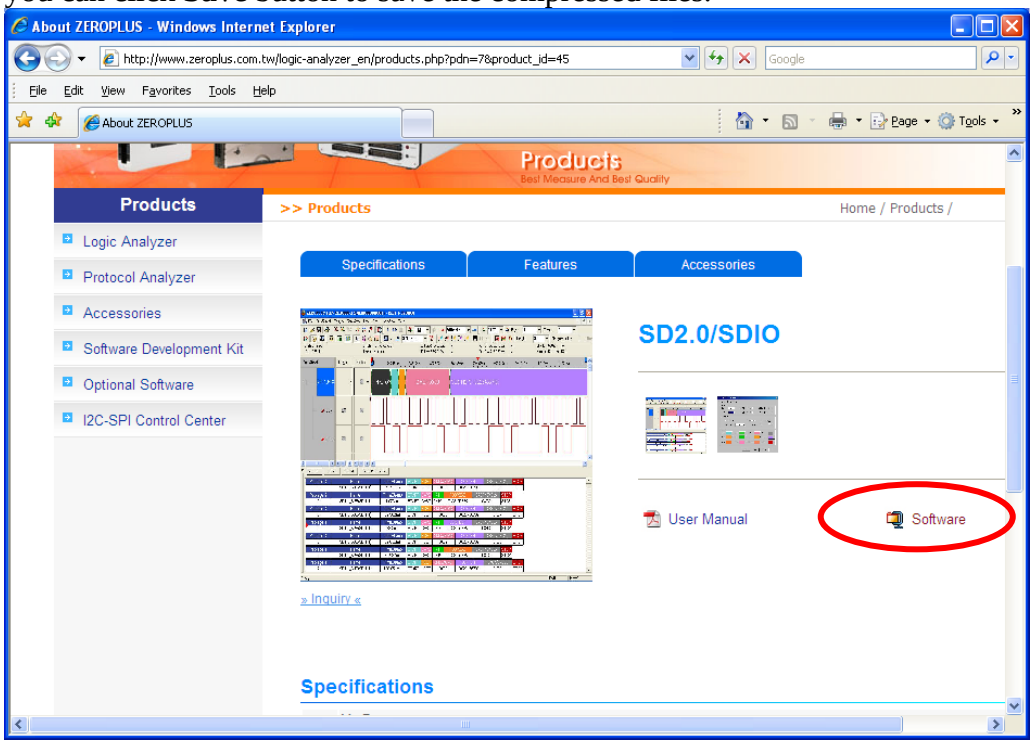
STEP 5. Click **SD2.0/SDIO** in the **PC System** column.



STEP 6. Click **Software** in the Products page. When the File Download dialog box appears, you can click **Save** button to save the compressed files.



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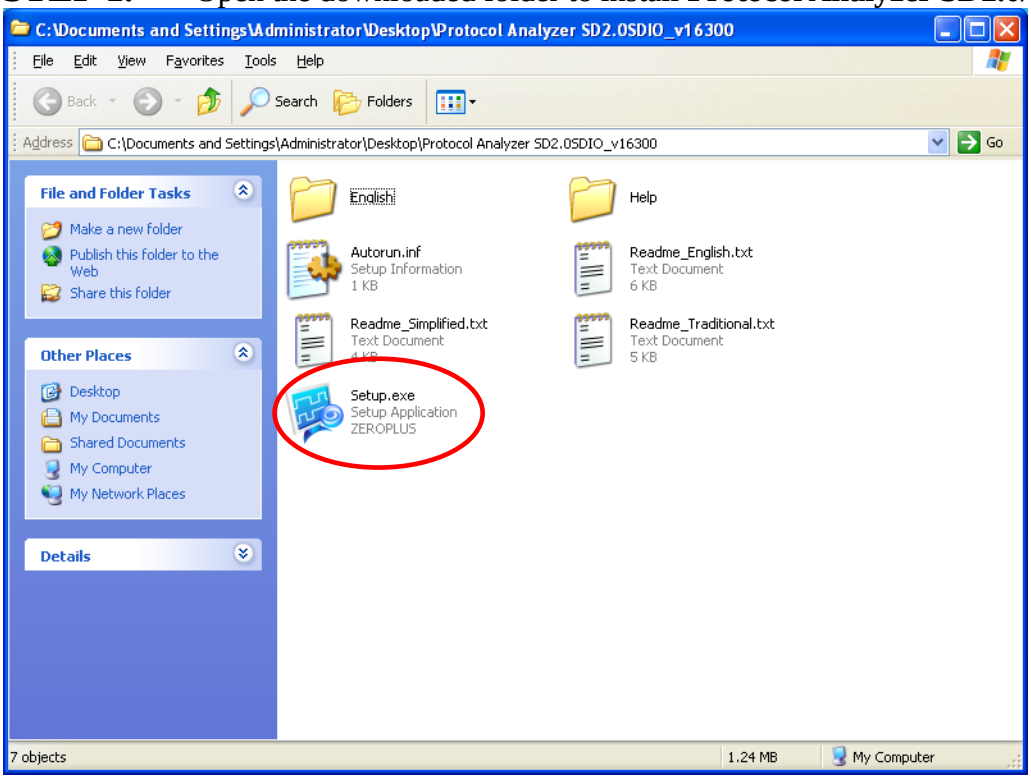
2 Software Installation

STEP 1. Open the downloaded folder to install **Protocol Analyzer SD2.0/SDIO**.



STEP 2. Click **Install**.

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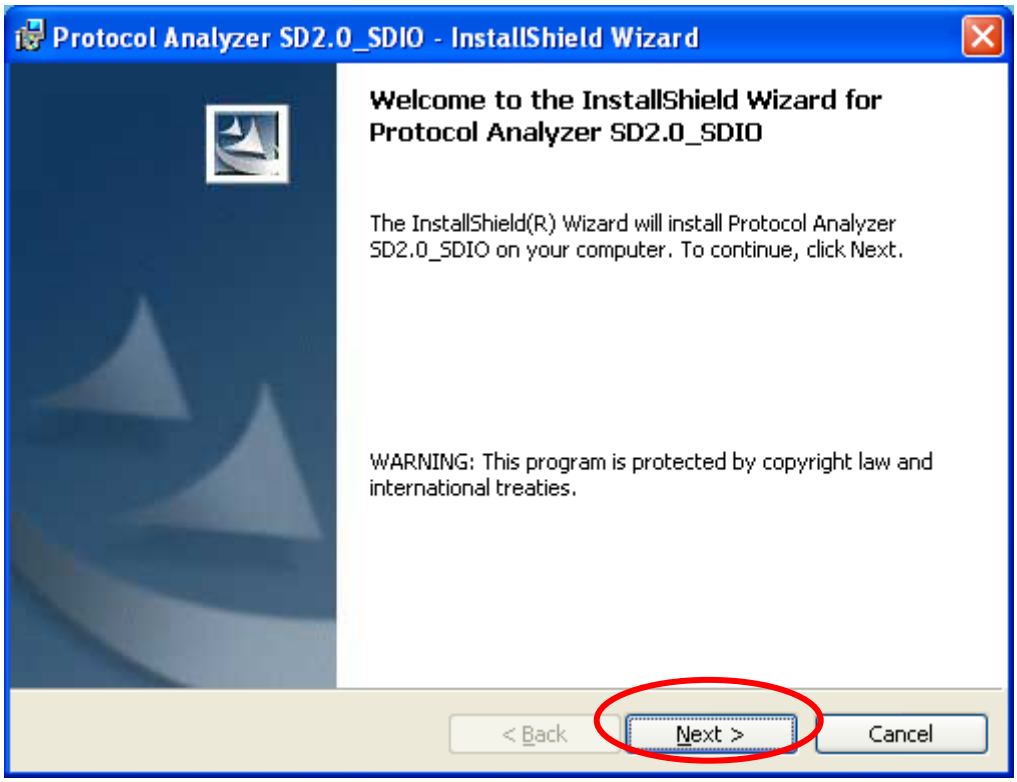
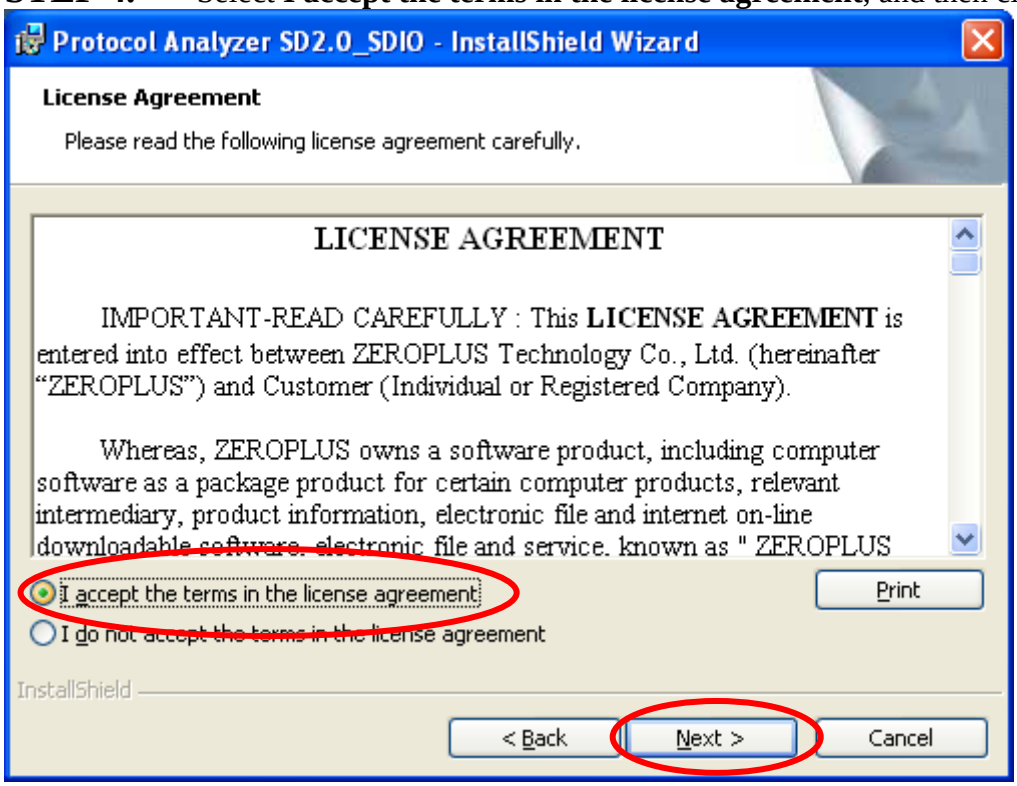
STEP 3. Click **Next**.



STEP 4. Select **I accept the terms in the license agreement**, and then click **Next**.



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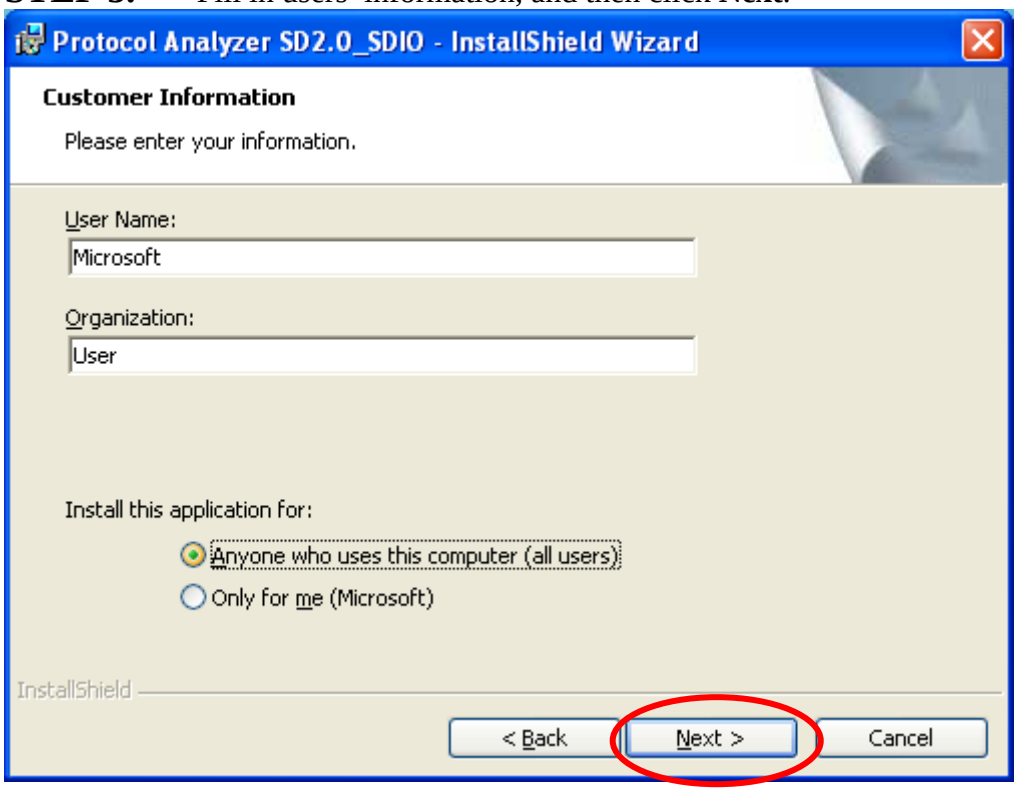
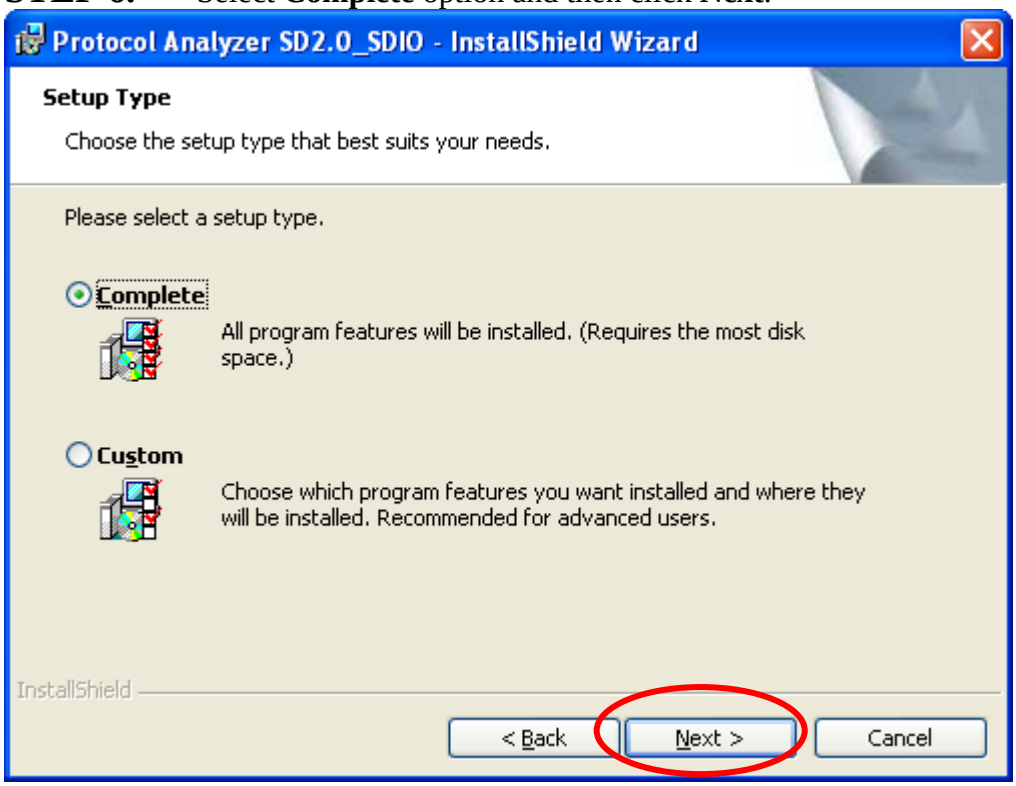
STEP 5. Fill in users' information, and then click **Next**.



STEP 6. Select **Complete** option and then click **Next**.



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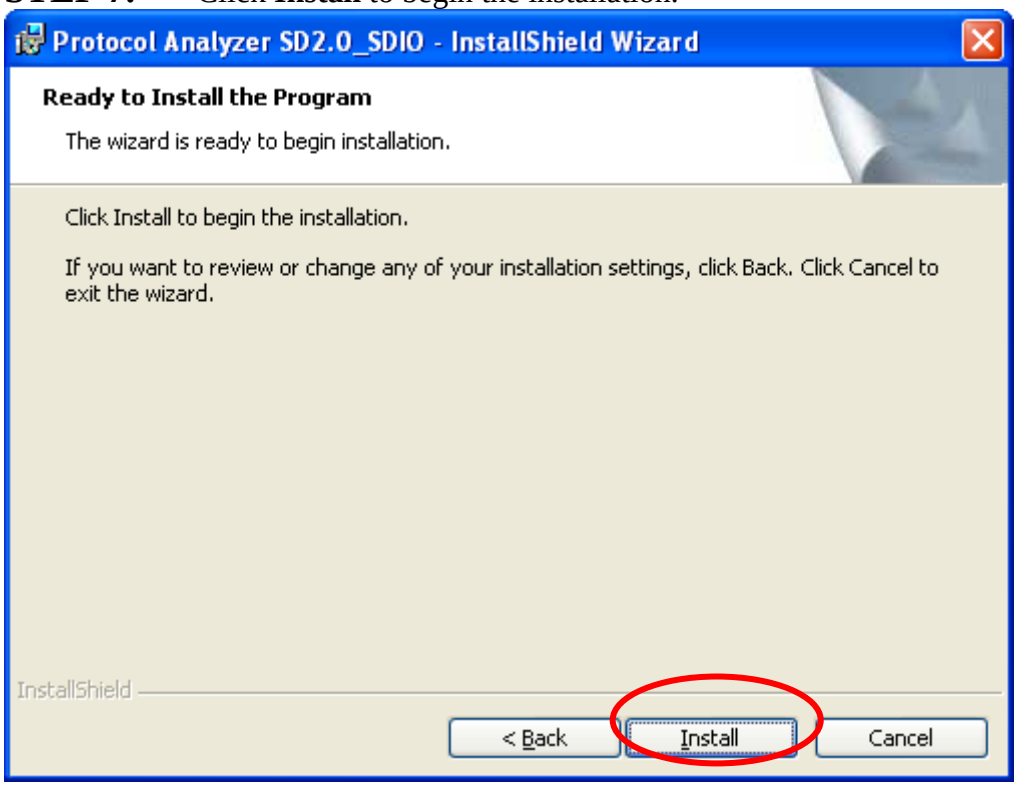
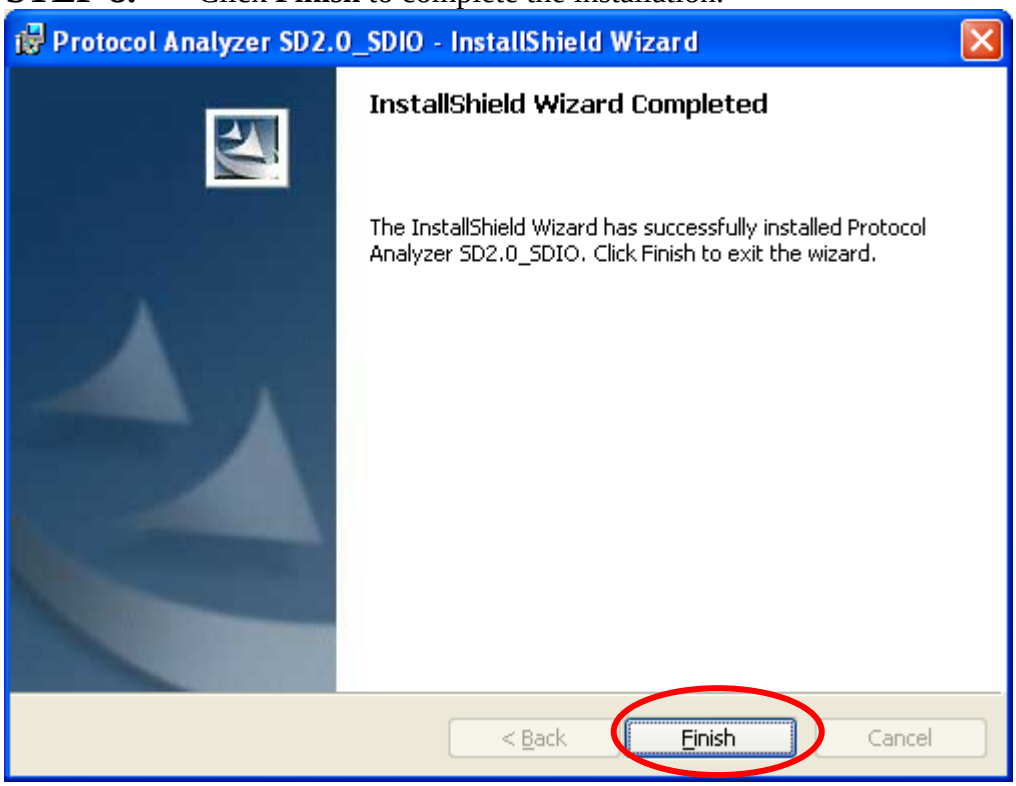
STEP 7. Click **Install** to begin the installation.



STEP 8. Click **Finish** to complete the installation.



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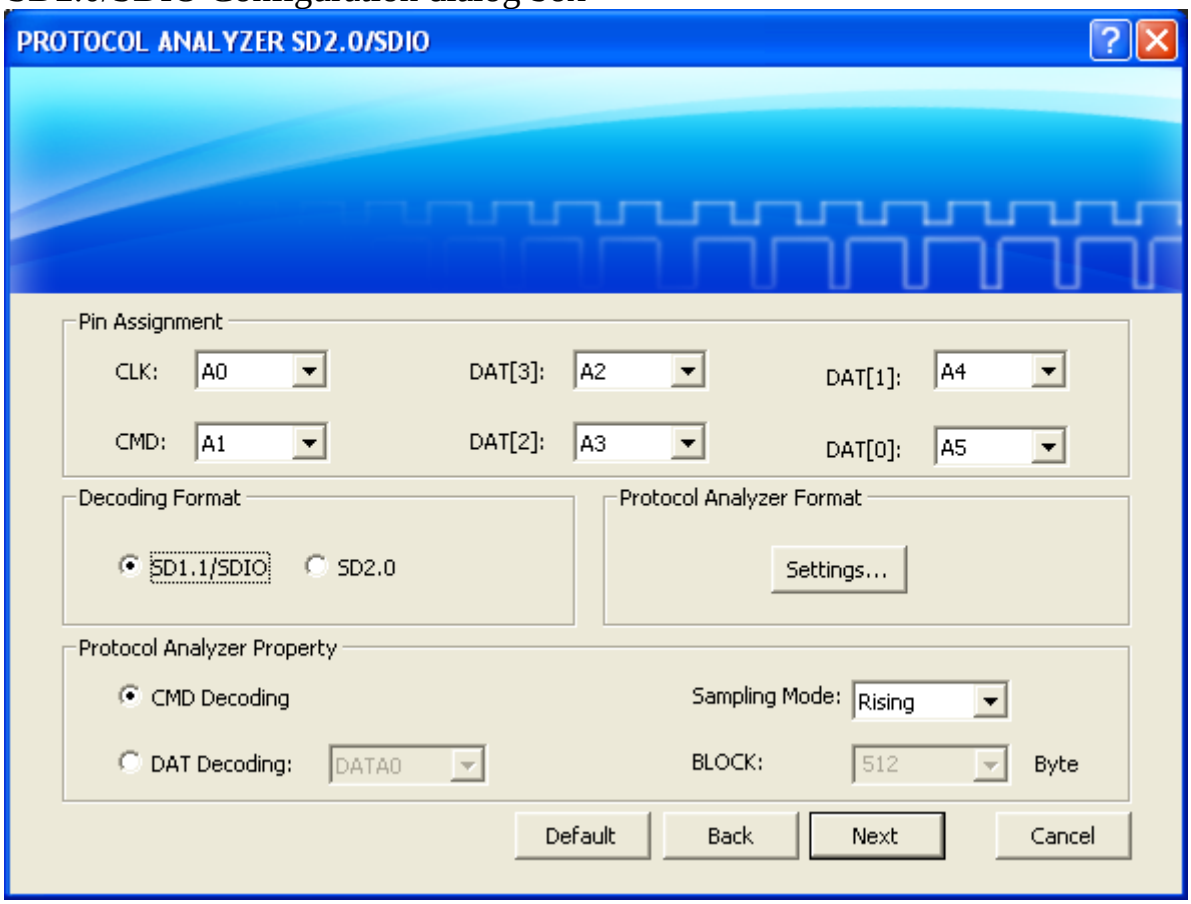
3 User Interface

Please refer to the below images to select options of setting **SD2.0/SDIO** Module.

SD2.0/SDIO Configuration dialog box



Pin Assignment:
The CLK is the Clock channel, the CMD is the Command channel and the DAT [0] ~ [3] are the Data channels

Decoding Format:
There are two modes (SD 1.1/SDIO and SD 2.0) for selecting.

Protocol Analyzer Property:
CMD Decoding: It is used to decode the Command and Response only.
DAT Decoding: It is used to decode the transmitted data only. Two options can be chosen, DATA0 or DATA0~3.
BLOCK: Users can vary the BLOCK Size on SD2.0/SDIO card. The options are 512 Byte, 1024 Byte and 2048 Byte. And the BLOCK Size can be entered directly in the range from1Byte to 32767 Byte.
Sampling Mode: Users can set the CLK sampling mode to Rising or Falling.

Protocol Analyzer Format:
Press the **Settings** button to open the Protocol Analyzer Format dialog box. The Color of each Item

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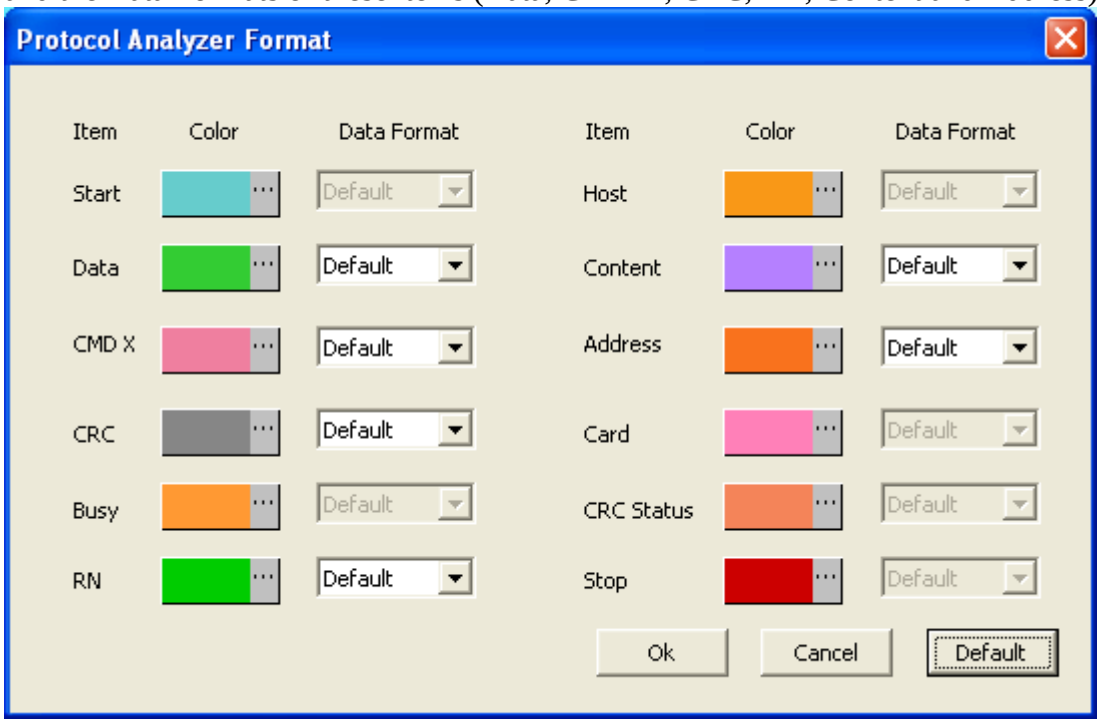
can be varied as the users' requirements. The Items (Data, CMD X, CRC, RN, Content and Address) can be set as Binary, Decimal, Hexadecimal, ASCII or Default. And the Data Formats of these Items (Data, CMD X, CRC, RN, Content and Address) in the Waveform Display Area and Packet List are controlled by the Protocol Analyzer. The default Data Formats are controlled by the main program and the Data Formats of these items (Data, CMD X, CRC, RN, Content and Address) are the Default.



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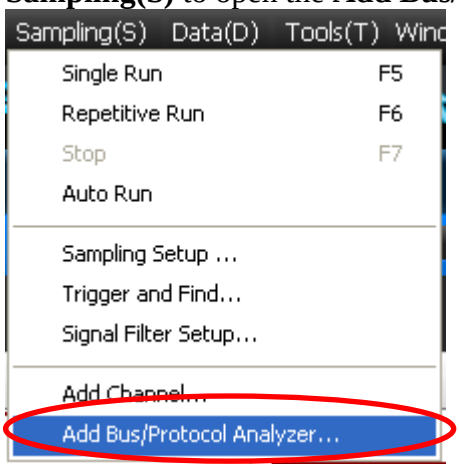
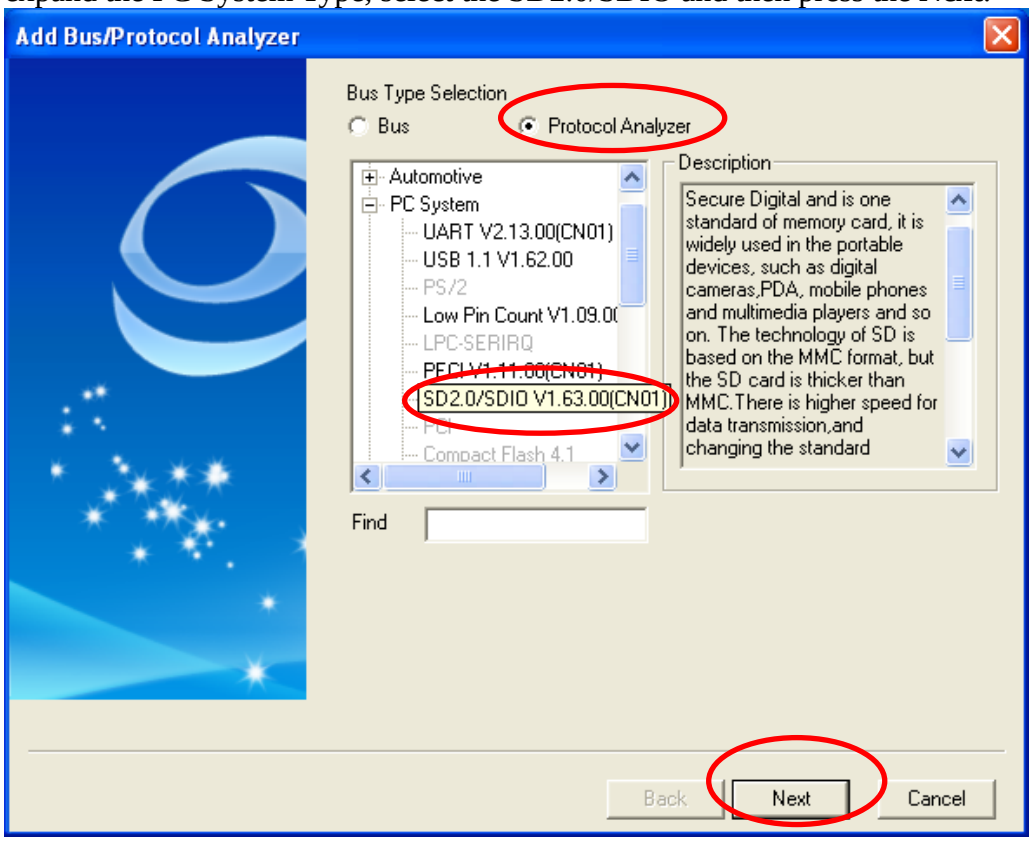
4 Operating Instructions

STEP 1. Select the **Add Bus/Protocol Analyzer** item on the pull-down menu of the **Sampling(S)** to open the **Add Bus/Protocol Analyzer** dialog box.



STEP 2. Select the Protocol Analyzer item in the Add Bus/Protocol Analyzer dialog box, expand the PC System Type, select the SD2.0/SDIO and then press the **Next**.



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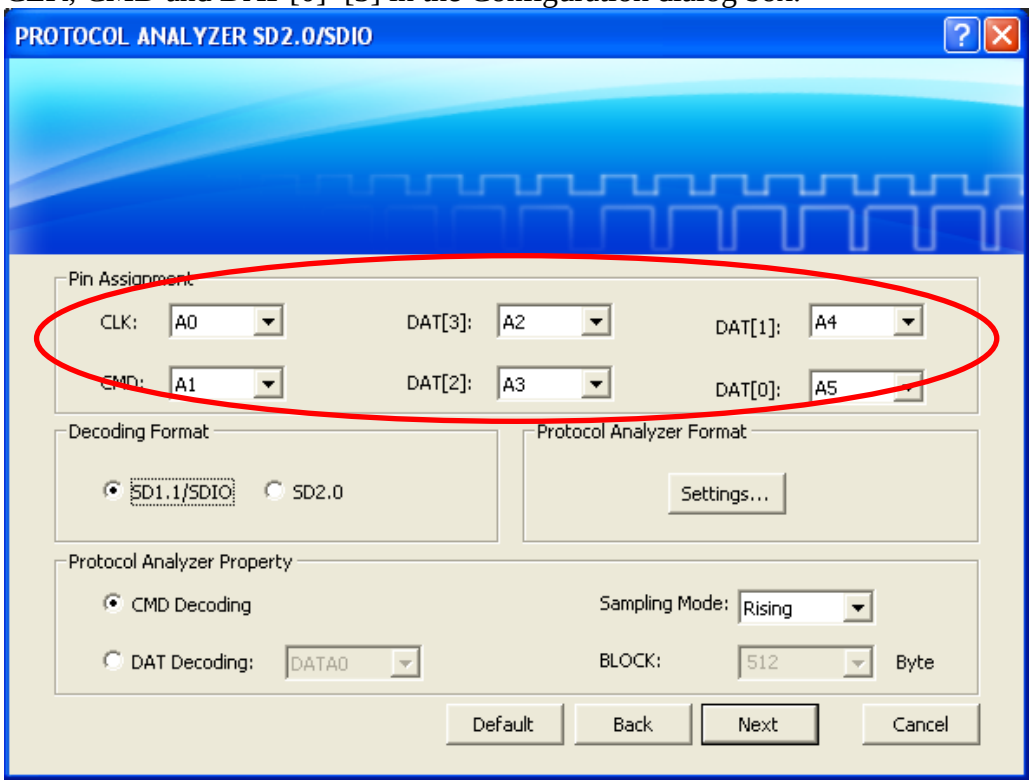
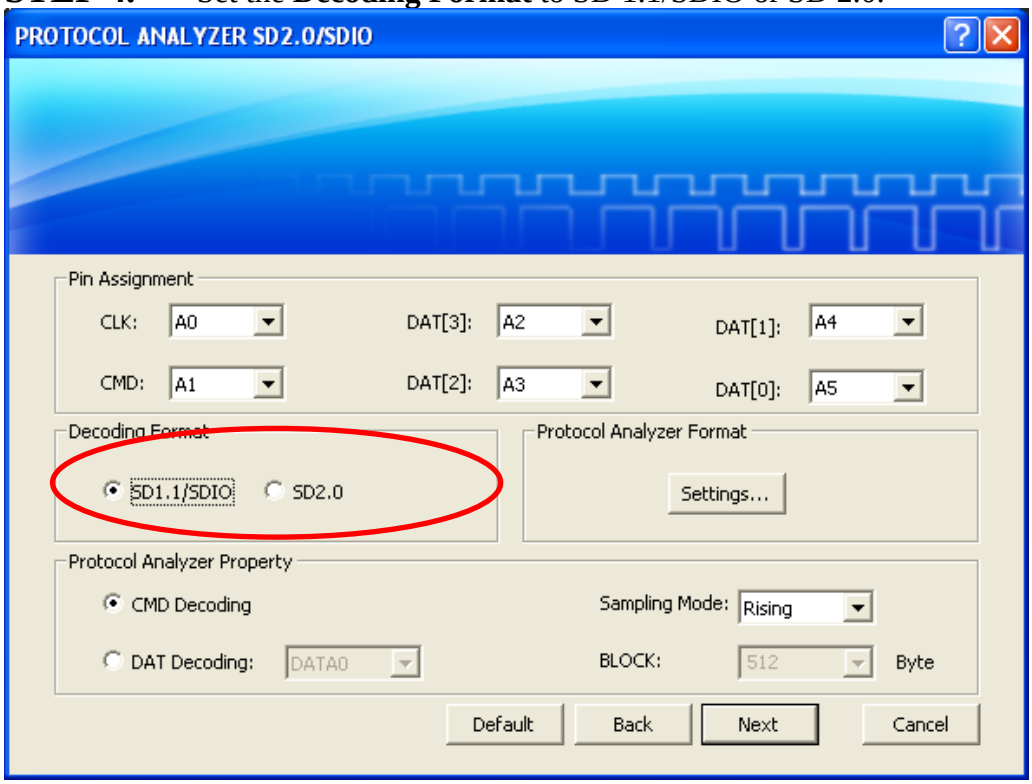
STEP 3. Open the PROTOCOL ANALYZER SD2.0/SDIO dialog box and set the channels of CLK, CMD and DAT [0]~[3] in the Configuration dialog box.



STEP 4. Set the **Decoding Format** to SD 1.1/SDIO or SD 2.0.



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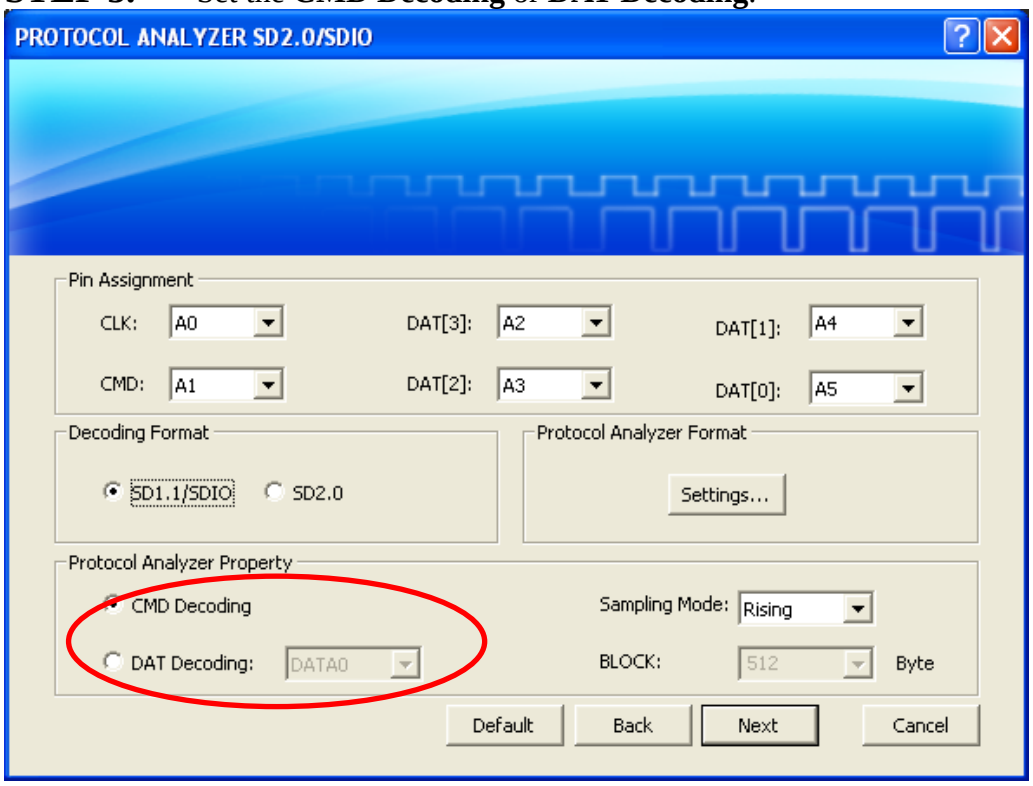
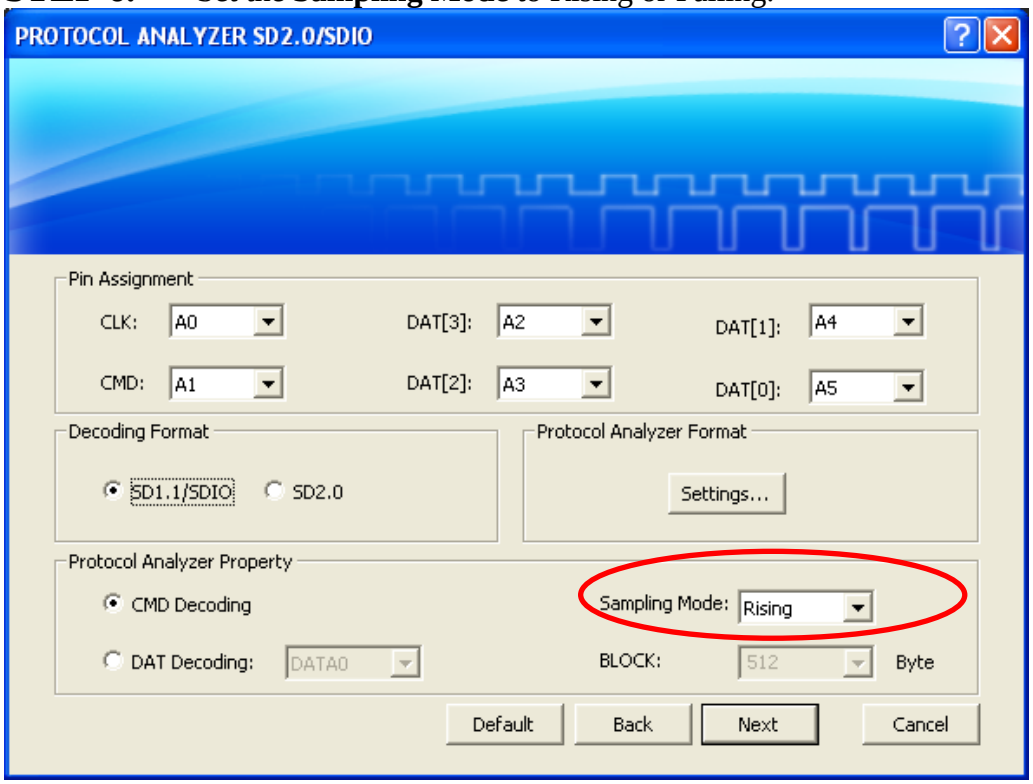
STEP 5. Set the **CMD Decoding** or **DAT Decoding**.



STEP 6. Set the **Sampling Mode** to Rising or Falling.



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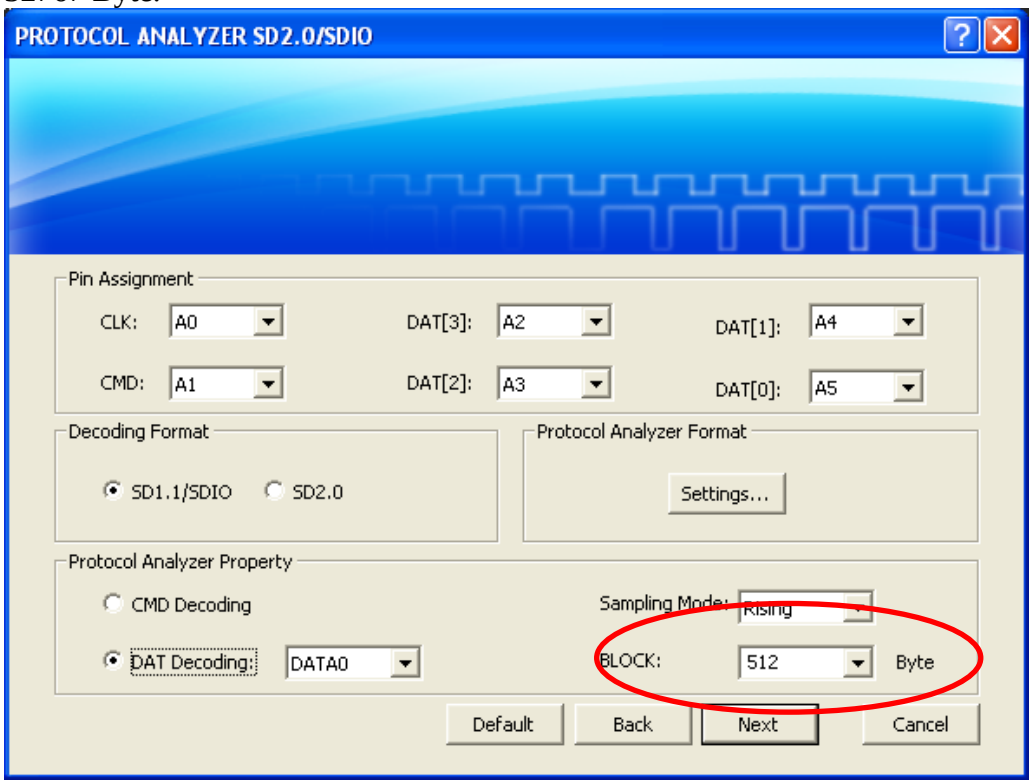
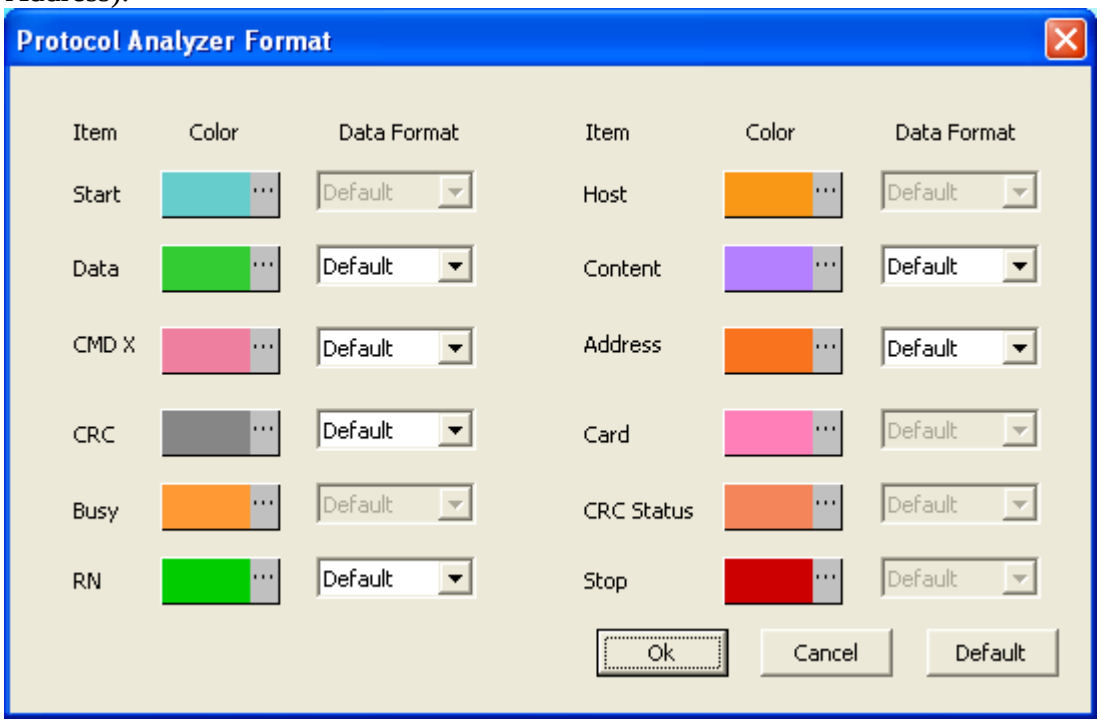
STEP 7. Select the **Data Decoding** to set the BLOCK Size in the range from 1 Byte to 32767 Byte.



STEP 8. Press the **Settings** button to open the Protocol Analyzer Format dialog box, and then set the Color of each Item and the Data Format of the Items (Data, CMD X, CRC, RN, Content and Address).



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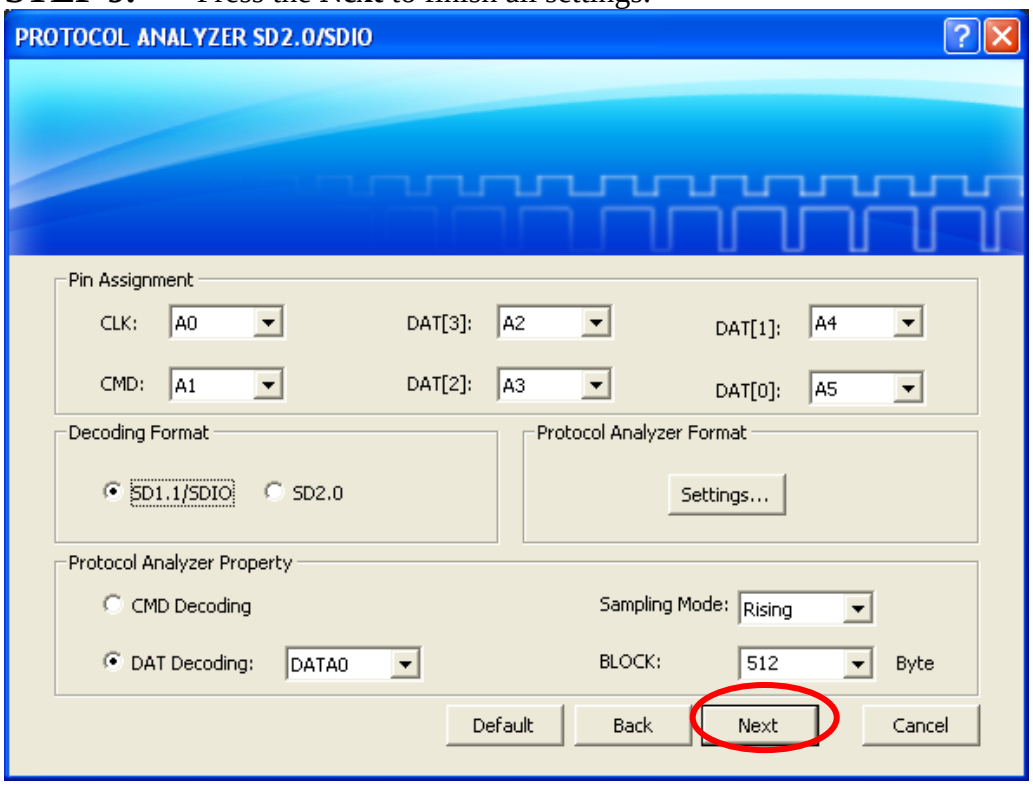
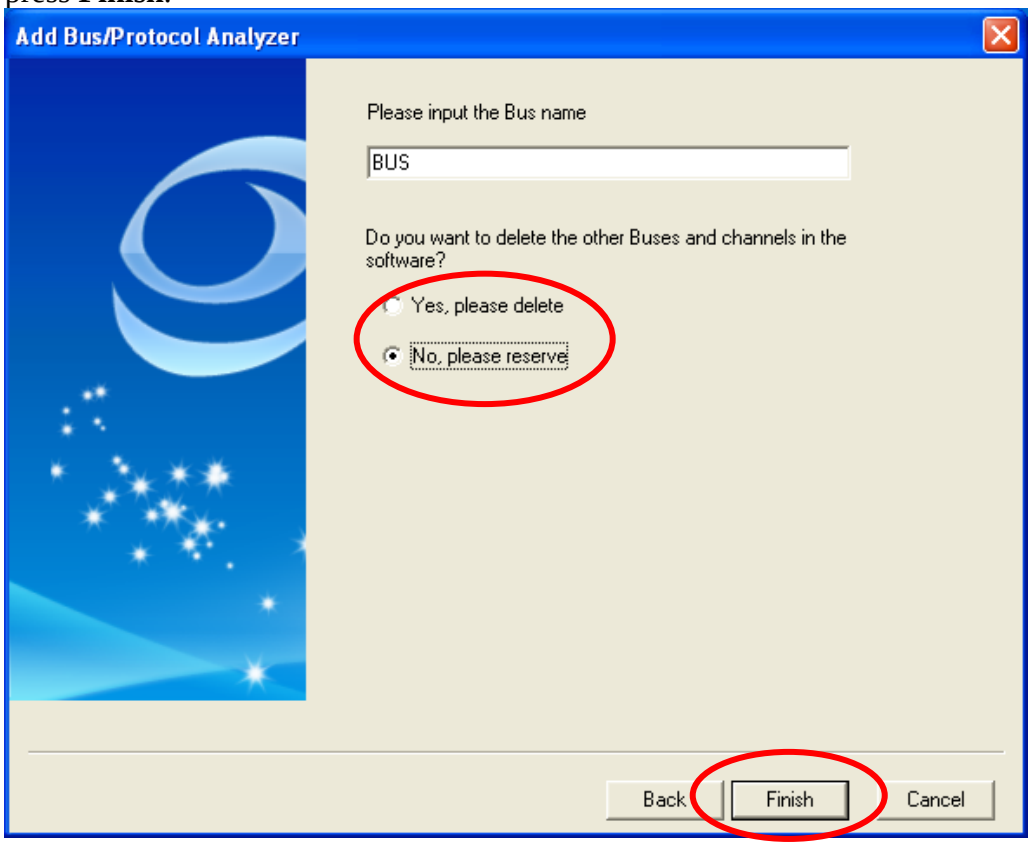
STEP 9. Press the **Next** to finish all settings.



STEP 10. Please enter the Bus Name, select **Yes, please delete** or **No, please reserve** and then press **Finish**.



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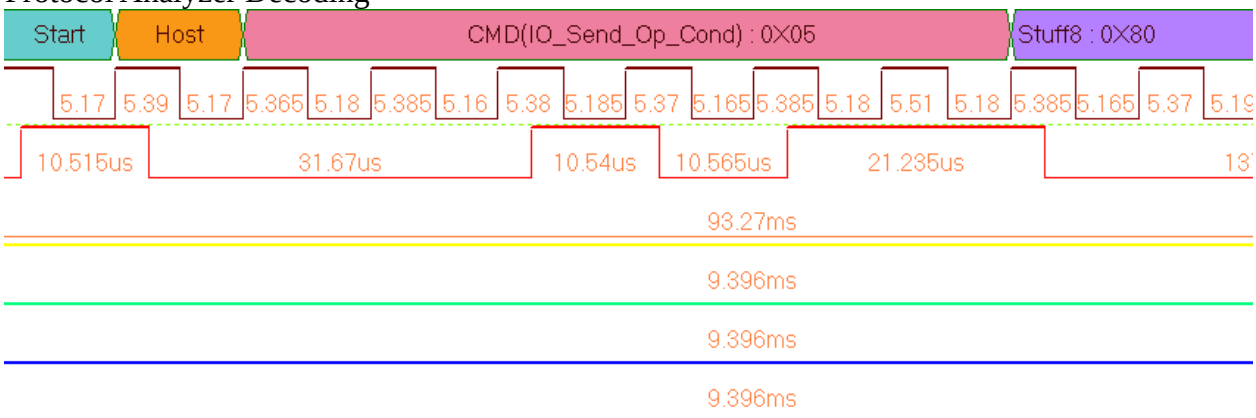
STEP 11. Following pictures show the completion of the protocol analyzer decoding and the packet list. The trigger condition is set as Either Edge; the memory depth is 128K; the sampling frequency is 200MHz (the sampling frequency should be more than four times higher than the signal to be tested).

Protocol Analyzer Decoding



Packet List